

CLAIMS

The invention claimed is:

1. A swivel drop ear elbow fitting, comprising:

a threaded nut including one of a plurality of integrated attachment ears and an integrated mounting ring located along an external periphery of the threaded nut, wherein each of the attachment ears when implemented includes an aperture for receiving a fastener for securing the threaded nut to a stationary support, and wherein the mounting ring when implemented includes a plurality of mounting holes;

a retaining ring; and

a hollow elbow adapter including a first portion centrally positioned with respect to a first axis and a second portion centrally positioned with respect to a second axis, wherein the second axis is not colinear with the first axis, and wherein an outer surface of the first portion of the elbow adapter is shaped to receive the retaining ring which retains the threaded nut on the first portion of the hollow elbow adapter while allowing the hollow elbow adapter to rotate with respect to the threaded nut.

2. The swivel drop ear elbow fitting of claim 1, wherein the first axis is substantially orthogonal with respect to the second axis.

3. The swivel drop ear elbow fitting of claim 1, wherein the first axis forms an obtuse angle with respect to the second axis.

4. The swivel drop ear elbow fitting of claim 1, wherein the plurality of integrated attachment ears includes three attachment ears that are equally spaced along the external periphery of the threaded nut.

5. The swivel drop ear elbow fitting of claim 1, wherein the retaining ring is a grooveless retaining ring.

6. The swivel drop ear elbow fitting of claim 1, wherein an outer surface of the second portion of the hollow elbow adapter includes a plurality of axially spaced ribs.

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Sub a2 > 7. The swivel drop ear elbow fitting of claim 1, further including:
a seal with an inner diameter sized to receive the first portion of the hollow elbow adapter and an outer diameter sized to substantially eliminate fluid leakage between an external fitting that is threadingly received by the threaded nut.

8. The swivel drop ear elbow fitting of claim 7, wherein the seal is one of a cone-shaped seat and a gasket made of one of an elastomeric material and rubber.

9. The swivel drop ear elbow fitting of claim 1, wherein threads of the threaded nut are straight threads.

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10. A swivel drop ear elbow fitting, comprising:

a threaded nut including a plurality of integrated attachment ears located along an external periphery of the threaded nut, wherein each of the attachment ears includes an aperture for receiving a fastener for securing the threaded nut to a stationary support;

a retaining ring;

a hollow elbow adapter including a first portion centrally positioned with respect to a first axis and a second portion centrally positioned with respect to a second axis, (wherein the second axis is colinear with the first axis) and wherein an outer surface of the first portion of the elbow adapter is shaped to receive the retaining ring which retains the threaded nut on the first portion of the hollow elbow adapter while allowing the hollow elbow adapter to rotate with respect to the threaded nut; and

a seal with an inner diameter sized to receive the first portion of the hollow elbow adapter and an outer diameter sized to substantially eliminate fluid leakage (between an external fitting that is threadingly received by the threaded nut.)

11. The swivel drop ear elbow fitting of claim 10, wherein the first axis is substantially orthogonal with respect to the second axis.

12. The swivel drop ear elbow fitting of claim 10, wherein the first axis forms an obtuse angle with respect to the second axis.

13. The swivel drop ear elbow fitting of claim 10, wherein the plurality of integrated attachment ears includes three attachment ears that are equally spaced along the external periphery of the threaded nut.

14. The swivel drop ear elbow fitting of claim 10, wherein the retaining ring is a grooveless retaining ring.

15. The swivel drop ear elbow fitting of claim 10, wherein an outer surface of the second portion of the hollow elbow adapter includes a plurality of axially spaced ribs.

16. The swivel drop ear elbow fitting of claim 10, wherein the seal is one of a cone-shaped seat and a gasket made of one of an elastomeric material and rubber.

17. A swivel drop ear elbow fitting, comprising:

a threaded nut including a plurality of integrated attachment ears located along an external periphery of the threaded nut, wherein each of the attachment ears includes an aperture for receiving a fastener for securing the threaded nut to a stationary support, and wherein threads of the threaded nut are straight threads;

a retaining ring;

a hollow elbow adapter including a first portion centrally positioned with respect to a first axis and a second portion centrally positioned with respect to a second axis, wherein the second axis forms an obtuse angle with respect to the first axis, and wherein an outer surface

of the first portion of the elbow adapter is shaped to receive the retaining ring which retains the threaded nut on the first portion of the hollow elbow adapter while allowing the hollow elbow adapter to rotate with respect to the threaded nut; and

a cone-shaped seat made of one of an elastomeric material and rubber with an inner diameter sized to receive the first portion of the hollow elbow adapter and an outer diameter sized to substantially eliminate fluid leakage (between an external fitting that is threadingly received by the threaded nut.

18. The swivel drop ear elbow fitting of claim 17, wherein the plurality of integrated attachment ears includes three attachment ears that are equally spaced along the external periphery of the threaded nut.

19. The swivel drop ear elbow fitting of claim 17, wherein the retaining ring is a grooveless retaining ring.

20. The swivel drop ear elbow fitting of claim 17, wherein an outer surface of the second portion of the hollow elbow adapter includes a plurality of axially spaced ribs.